

Case 3259

***Eristalis* Latreille, 1804 (Insecta, Diptera): proposed confirmation that the gender is feminine; *Musca nemorum* Linnaeus, 1758, *M. arbustorum* Linnaeus, 1758 and *M. horticola* De Geer, 1776 (currently *Eristalis nemorum*, *E. arbustorum* and *E. horticola*): proposed conservation of usage of the specific names by designation of neotypes**

Peter J. Chandler

606B Berryfield Lane, Melksham, Wiltshire SN12 6EL, U.K.

(e-mail: chandgnats@aol.com)

Andrew Wakeham-Dawson

Mill Laine Farm, Offham, Lewes, East Sussex BN7 3QB, U.K.

Angus McCullough

108 Addison Gardens, London W14 0DS, U.K.

Abstract. The purpose of this application, in accordance with Articles 79.5 and 75.6 of the Code, is twofold. First, it seeks to confirm that the gender of the generic name *Eristalis* Latreille, 1804 is feminine. Secondly, it seeks to maintain long-established usage of two specific names in this genus: *Eristalis nemorum* (Linnaeus, 1758) and *Eristalis horticola* (De Geer, 1776) by designating neotypes for *E. arbustorum* (Linnaeus, 1758), *E. nemorum* and *E. horticola*.

Keywords. Nomenclature; taxonomy; Diptera; SYRPHIDAE; *Eristalis*; *Eristalis arbustorum*; *Eristalis interrupta*; *Eristalis nemorum*; *Eristalis horticola*; *Eristalis lineata*; bee-mimic hoverflies.

The gender of the generic name *Eristalis* Latreille, 1804

1. The name *Eristalis* was proposed by Latreille in 1804 (p. 194) for a group of hoverflies (Diptera, SYRPHIDAE). It was unclear what gender he attributed to the name because the seven included species were all listed in combination with *Syrphus* (and attributed to Fabricius, who had included them in that genus) and consequently had masculine terminations in the three cases (*intricarius*, *floreus* and *pendulus*) where the specific name was affected by gender. Only two of the originally included species (*tenax*, *intricarius*) are currently placed in *Eristalis*.

2. The type species of *Eristalis* is *Musca tenax* Linnaeus, 1758 (p. 591) by subsequent designation by Curtis (1832, pl. 432, text). In 1993 the Commission placed *Eristalis* on the Official List (Opinion 1747) and gave its gender as masculine, but gave no reason for this choice of gender. This followed usage in some earlier literature including Verrall (1901) and all subsequent British literature, and has been accepted in a checklist of British Diptera (Chandler, 1998) which was followed by Stubbs & Falk (2002). The Nearctic list (Wirth et al., 1965) also treated it as masculine. However, other regional lists (Knutson et al., 1975, Oriental; Smith & Vockeroth,

1980, Afrotropical; Peck, 1988, Palaearctic; Thompson & Vockeroth, 1989, Australasian and Oceanian) and a recent work on Neotropical species (Thompson, 1997) treat it as feminine. The European literature is inconsistent. Some national lists (e.g. Soszynski, 1991, Poland; Verlinden, 1991, Belgium; Holinka & Mazánek, 1997, Czech & Slovak Republics; Marcos-García et al., 2002, Spain, Portugal & Andorra) and faunistic works (e.g. Kormann, 1988; Torp, 1984) treat it as masculine. Other national lists (e.g. Daccordi, 1995, Italy; Maibach et al., 1998, Switzerland; Ssymank et al., 1999, Germany; Tóth, 2001, Hungary; van Steenis & Barendregt, 2002, Netherlands) and faunistic works (e.g. van der Goot, 1981; Torp, 1994; Nielsen, 1999) continue to consider the gender of *Eristalis* to be feminine.

3. In particular, Hippa, Nielsen & van Steenis (2001, p. 293) state that the gender of *Eristalis* is feminine and cite Article 31.1.1 by way of justification. However, they must have intended citing Article 30.1.1, which states that 'a genus-group word that is or ends in a Latin word takes the gender given for that word in standard Latin dictionaries'. Brown (1954, p.339) describes 'eristalis' as a feminine Latin word that refers to an unknown precious stone.

4. Given the widespread acceptance of feminine gender for *Eristalis* and the fact that this choice of gender is supported by Article 30.1.1, we propose that the Commission amends Opinion 1747, in accordance with Article 79.5, by ruling that *Eristalis* is feminine and that the Official List of Generic Names in Zoology is amended to this effect.

Proposed conservation of the names *Eristalis nemorum*, *E. arbustorum* and *E. horticola* by designation of neotypes

5. This application concerns the names of three well-known and common species of bee mimic hoverflies (Diptera, SYRPHIDAE) in the genus *Eristalis* Latreille, 1804, of which the type species is the drone fly *Musca tenax* Linnaeus, 1758 (p. 591). Two of these species, *E. arbustorum* (Linnaeus, 1758 (p. 591)) and *E. nemorum* (Linnaeus, 1758 (p. 591)) have a Holarctic distribution while the third, *E. horticola* (De Geer, 1776 (p. 140)), is a widespread Palaearctic species and also extends into the Oriental Region, as does *E. arbustorum*. These specific names are unaffected by the gender of the generic name discussed above as the first two are genitive plurals and the third is a noun in apposition.

6. Thompson et al. (1982) revised the SYRPHIDAE in Linnaeus's collection and designated lectotypes of some species including *E. tenax* and *E. nemorum*. Under *E. arbustorum* (p. 151) they found a female of *E. tenax*, which they concluded to have been substituted and not a syntype, as Linnaeus's description could apply only to a male of either *E. tenax* or *E. arbustorum*. Consequently they did not designate a lectotype of *E. arbustorum* and concluded that existing usage should prevail. Under *E. nemorum* (p. 158) they found a female of *E. arbustorum* and designated it as lectotype, concluding that it fitted Linnaeus's description, which some early authors had concluded to refer to the female of *E. arbustorum*. Resulting from this synonymy they stated that the valid name for *nemorum* of authors was *E. interrupta* (Poda, 1761, p. 118) but gave no justification for considering this name to apply to *E. nemorum* of authors. In view of the uncertainty about whether specimens in Linnaeus's collection are syntypes (see also Case 3090, BZN June 2000, and the resulting Opinion 1982, BZN September 2001) it is considered that the replacement of the name *E. nemorum*,

which had been in use for this species for two centuries, by a name that had not previously been used as a valid name in SYRPHIDAE, was unjustified.

7. Most subsequent authors have followed Thompson et al. (1982) in accepting the synonymy of *E. nemorum* with *E. arbustorum* and have used the name *E. interrupta* or *E. interruptus*, according to the gender that they have applied to *Eristalis*, for *E. nemorum* of authors. Thompson & Pont (1994) listed *Conops interruptus* Poda, 1761, stating it to be a valid name in *Eristalis* but indicated that there was no surviving type material. The identification of *E. interruptus* as *E. nemorum* of authors is not, however, unequivocal since in the Palaearctic Catalogue (Peck, 1988) it is listed in the synonymy of *E. tenax* while five other names (of which *Musca lineolae* Harris, 1776 is the most senior) are listed in synonymy with *nemorum*. Although Peck (1988) appeared after Thompson et al. (1982) the cut-off date for inclusion in the catalogue was 1982 and Thompson et al. (1982) was not cited, hence the traditional usage of *E. nemorum* in this catalogue. This doubt about the identity of *Conops interruptus* is considered to support the restoration of the name *E. nemorum*.

8. The name *Musca horticola* was proposed by De Geer (1776, p. 140) for a species of bee mimic hoverfly. At the same time (1776, p. 140), he erroneously listed *Musca nemorum* Linnaeus, 1758 (p. 591) as a synonym of *M. horticola*. As indicated above *M. nemorum* was synonymised with *M. arbustorum* Linnaeus, 1758 (p. 591) by Thompson et al. (1982). As a result, Thompson & Pont (1994) treated *M. horticola*, *M. nemorum* and *M. arbustorum* as synonyms. Thompson & Pont (1994) accepted the name *Musca lineata* Harris, 1776 (p. 42) as the valid name for *M. horticola* of authors but this name was not subsequently used for this species until the revision by Hippa et al. (2001). No type material exists for any species described by Harris but *E. lineata* has long been regarded as a synonym of *E. horticola* on the basis of the colour plate provided by Harris. According to Evenhuis (1997), the precise publication date of the 1776 works of both De Geer and Harris is not known so it cannot be confirmed which name has priority. It is, however, considered that the description of *E. horticola* by De Geer applied to the species that has been known by this name for more than two centuries and *E. lineata* had not been used as a valid name during this time. As stated in Case 3090 (p. 90), De Geer (1776) cited Linnaean names following his own diagnoses of fifteen Diptera species described as new by him and in several of these cases the synonymy is clearly wrong. As in these cases it is considered that De Geer intended his name *horticola* for a newly described species and not as a replacement name for Linnaeus's species *nemorum*. *Musca horticola* De Geer, 1776 was a newly described species different from *nemorum* and there is no justification for regarding it as a synonym of *Musca nemorum* Linnaeus, 1758.

9. In order to maintain the long prevailing usage (for a period of more than 200 years) of the names *E. nemorum* and *E. horticola* and at the same time confirm the usage of *E. arbustorum*, we propose that the Commission set aside all existing type material for these three nominal taxa and designate neotypes in accordance with Article 75.6 of the Code. The type locality of *Musca arbustorum* and *Musca nemorum* was stated by Linnaeus to be Europe but Thompson et al. (1982) restricted this to Sweden. The type locality of *Musca horticola* was not stated but is again assumed to be Sweden. A Swedish male specimen of each of the three species in the collection of The Natural History Museum, London, has been selected as the proposed neotype and each has been labelled 'NEOTYPE designated by P.J. Chandler 2004', subject to the Commission's ruling on this application.

10. The International Commission on Zoological Nomenclature is accordingly asked:

- (1) to use its plenary power:
 - (a) to amend the status of the generic name *Eristalis* Latreille, 1804 in accordance with Article 79.5 of the Code and rule that the gender of *Eristalis* is feminine;
 - (b) to set aside all previous type fixations for the nominal species:
 - (i) *Musca arbustorum* Linnaeus, 1758, and to designate the male specimen labelled Lpm, Sorsele, 10/8/58, leg. S. Gaunitz, R. Dahl Coll., BM 1997–740 as the neotype;
 - (ii) *Musca nemorum* Linnaeus, 1758, and to designate the male specimen labelled Sweden, Vstm, Nora district, Klacka Lerberg, 22.vi.1986, in horse paddock, leg. A.C. Pont, 'Er. interrupta (Poda) T.R. Nielsen det.' as the neotype;
 - (iii) *Musca horticola* De Geer, 1776, and to designate the male specimen labelled Sweden, Sk, Höör Lillöbukten, 2.viii.1980, leg. A.C. Pont, 'Eristalis horticola Deg. det. Tore Nielsen' as the neotype;
- (2) to amend the entry on the Official List of Generic Names in Zoology for the name *Eristalis* Latreille, 1804 to indicate that its gender is feminine;
- (3) to place on the Official List of Specific Names in Zoology the following names:
 - (a) *arbustorum* Linnaeus, 1758, as published in the binomen *Musca arbustorum* and as defined by the neotype designated in (1)(b)(i) above;
 - (b) *nemorum* Linnaeus, 1758, as published in the binomen *Musca nemorum* and as defined by the neotype designated in (1)(b)(ii) above;
 - (c) *horticola* De Geer, 1776, as published in the binomen *Musca horticola* and as defined by the neotype designated in (1)(b)(iii) above.

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Comments on this case are invited for publication (subject to editing) in the *Bulletin*; they should be sent to the Executive Secretary, I.C.Z.N., The Natural History Museum, Cromwell Road, London SW7 5BD, U.K. (e-mail: iczn@nhm.ac.uk).